

## CLAIMS

What is claimed is:

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1. A method for controlling access to protected resources within a distributed data processing system, the method comprising:

10 receiving at a first server from a client a request to access a protected resource and a single-use token associated with the client or a user of the client;

validating the single-use token, wherein the single-use token comprises session information for performing session management with respect to the client;

15 generating a response to the request;

refreshing the single-use token; and

20 sending the response and the refreshed single-use token to the client.

2. The method of claim 1 further comprising:

determining that the single-use token is a service token, wherein a service token is issued by the first server; and

25 refreshing the single-use service token at the first server.

3. The method of claim 1 wherein the session information in the single-use token is a session key.

4. The method of claim 1 further comprising:

determining that the single-use token is a domain token;

generating a client authorization credential request;

sending to a second server the client authorization credential request, the single-use domain token associated with the client or the user of the client, and a single-use domain token associated with the first server, wherein the first server and the second server are operated within a common domain.

5. The method of claim 4 further comprising:

validating at the second server the single-use domain token associated with the client or the user of the client and the single-use domain token associated with the first server;

generating the client authorization credential;

refreshing at the second server the single-use domain token associated with the client or the user of the client and the single-use domain token associated with the first server; and

sending to the first server the client authorization credential, the refreshed single-use domain token associated with the client or the user of the client, and the refreshed single-use domain token associated with the first server.

6. The method of claim 5 further comprising:  
storing the client authorization credential at the  
first server;  
generating a single-use service token associated  
5 with the client or the user of the client; and  
sending to the client the single-use service token  
along with the response and the single-use domain token.

7. The method of claim 1 further comprising:  
10 receiving a login request from the client at the  
second server;  
challenging the client to provide authentication  
data;  
receiving authentication data from the client;  
15 authenticating the client;  
generating a single-use domain token associated with  
the client or the user of the client;  
generating an authentication response; and  
sending the authentication response and the  
20 single-use domain token to the client.

8. The method of claim 7 further comprising:  
determining that the login request is a redirected  
request from the first server; and  
25 modifying the authentication response to redirect  
the client to the first server.

9. An apparatus for controlling access to protected resources within a distributed data processing system, the apparatus comprising:

5 means for receiving at a first server from a client a request to access a protected resource and a single-use token associated with the client or a user of the client;

means for validating the single-use token, wherein the single-use token comprises session information for

10 performing session management with respect to the client;

means for generating a response to the request;

means for refreshing the single-use token; and

means for sending the response and the refreshed single-use token to the client.

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10. The apparatus of claim 9 further comprising:

means for determining that the single-use token is a service token, wherein a service token is issued by the first server; and

20 means for refreshing the single-use service token at the first server.

11. The apparatus of claim 9 wherein the session information in the single-use token is a session key.

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12. The apparatus of claim 9 further comprising:

means for determining that the single-use token is a domain token;

5 means for generating a client authorization credential request;

means for sending to a second server the client authorization credential request, the single-use domain token associated with the client or the user of the client, and a single-use domain token associated with the  
10 first server, wherein the first server and the second server are operated within a common domain.

13. The apparatus of claim 12 further comprising:

15 means for validating at the second server the single-use domain token associated with the client or the user of the client and the single-use domain token associated with the first server;

means for generating the client authorization credential;

20 means for refreshing at the second server the single-use domain token associated with the client or the user of the client and the single-use domain token associated with the first server; and

25 means for sending to the first server the client authorization credential, the refreshed single-use domain token associated with the client or the user of the client, and the refreshed single-use domain token associated with the first server.

14. The apparatus of claim 13 further comprising:  
means for storing the client authorization  
credential at the first server;  
means for generating a single-use service token  
5 associated with the client or the user of the client; and  
means for sending to the client the single-use  
service token along with the response and the single-use  
domain token.

10 15. The apparatus of claim 9 further comprising:  
means for receiving a login request from the client  
at the second server;  
means for challenging the client to provide  
authentication data;  
15 means for receiving authentication data from the  
client;  
means for authenticating the client;  
means for generating a single-use domain token  
associated with the client or the user of the client;  
20 means for generating an authentication response; and  
means for sending the authentication response and  
the single-use domain token to the client.

16. The apparatus of claim 15 further comprising:  
25 means for determining that the login request is a  
redirected request from the first server; and  
means for modifying the authentication response to  
redirect the client to the first server.

17. A computer program product on a computer readable medium for controlling access to protected resources within a distributed data processing system, the computer program product comprising:

5 instructions for receiving at a first server from a client a request to access a protected resource and a single-use token associated with the client or a user of the client;

10 instructions for validating the single-use token, wherein the single-use token comprises session information for performing session management with respect to the client;

instructions for generating a response to the request;

15 instructions for refreshing the single-use token; and

instructions for sending the response and the refreshed single-use token to the client.

20 18. The computer program product of claim 17 further comprising:

instructions for determining that the single-use token is a service token, wherein a service token is issued by the first server; and

25 instructions for refreshing the single-use service token at the first server.

30 19. The computer program product of claim 17 wherein the session information in the single-use token is a session key.

20. The computer program product of claim 17 further comprising:

instructions for determining that the single-use token is a domain token;

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5      instructions for generating a client authorization
      credential request;
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instructions for sending to a second server the client authorization credential request, the single-use domain token associated with the client or the user of the client, and a single-use domain token associated with the first server, wherein the first server and the second server are operated within a common domain.

21. The computer program product of claim 20 further comprising:

instructions for validating at the second server the single-use domain token associated with the client or the user of the client and the single-use domain token associated with the first server;

20       instructions for generating the client authorization  
      credential;

instructions for refreshing at the second server the  
single-use domain token associated with the client or the  
user of the client and the single-use domain token  
associated with the first server; and

instructions for sending to the first server the client authorization credential, the refreshed single-use domain token associated with the client or the user of the client, and the refreshed single-use domain token associated with the first server.



22. The computer program product of claim 21 further comprising:

instructions for storing the client authorization credential at the first server;

5 instructions for generating a single-use service token associated with the client or the user of the client; and

10 instructions for sending to the client the single-use service token along with the response and the single-use domain token.

23. The computer program product of claim 17 further comprising:

15 instructions for receiving a login request from the client at the second server;

instructions for challenging the client to provide authentication data;

instructions for receiving authentication data from the client;

20 instructions for authenticating the client;

instructions for generating a single-use domain token associated with the client or the user of the client;

25 instructions for generating an authentication response; and

instructions for sending the authentication response and the single-use domain token to the client.

24. The computer program product of claim 23 further comprising:

instructions for determining that the login request is a redirected request from the first server; and

5       instructions for modifying the authentication  
      response to redirect the client to the first server.